

IN THE SPECIFICATION

On page 1, between lines 10 and 11, please insert the following section heading:

Field of the Invention

On page 1, between lines 16 and 17, please insert the following section heading:

Discussion of the Background

Please replace the paragraph at page 1, line 32, through page 2, line 1, with the following rewritten paragraph:

A schema defines one structure of plurality of a tuples to be registered in one table. Users perform data storing with registration of tuples with a structure defined by a schema in several tables for which the schema has been defined by supervisory users. Users also perform data processing (updating) with changing the contents of tuples within a range defined by the schema.

Please replace the paragraph at page 2, lines 2-6, with the following rewritten paragraph:

This system, however, cannot efficiently perform data storing and processing as discussed below, and thus has almost ~~of~~ no use due to extreme decrease in efficiency, ~~except~~ that unless registration of many tuples (records) of the same type in each of a small number of tables (files) is only required.

Please replace the paragraph beginning at page 2, lines 37, through page 3, line 2, with the following rewritten paragraph:

This method could, however, cause inevitable introduction of undesired identifier data items that ~~have~~ did not ~~been-existed~~ exist for the original data.

Please replace the paragraph at page 3, lines 7-11, with the following rewritten paragraph:

Not only decrease in efficiency, for example, the method (1) further ~~have~~ has a problem in that a schema must be changed for database restructuring when handling data including same type of data ~~the~~ of a number of which exceeds an assumed maximum value.

Please replace the paragraph at page 3, lines 22-29, with the following rewritten paragraph:

In view of these problems, a purpose of the present invention is to provide a data management method and a storage medium storing a data management that can enlarge a database flexibly and efficiently without halting services to application systems even when data types different from those assumed first are required after the database has been constructed and services to the application systems ~~has~~ have been started.

Please replace the paragraph at page 9, lines 15-24, with the following rewritten paragraph:

FIG. 3 is a schematic view showing a group of instances managed by a lexicon. As shown, a cell is registered in any one of lexicons. There are several lexicons managed by a lexicon-set. Each lexicon has its own particular name. Any lexicon can be retrieved from the

lexicon-set according to its name. An application system retrieves a lexicon required for its processing from the lexicon-set according to the lexicon's name and also retrieves cells managed under the lexicon according to the contents of the cells, thus retrieving desired instances.

Please replace the paragraph at page 12, lines 6-11, with the following rewritten paragraph:

Next, one row data in the original data is retrieved in step S3, followed by adding facade names of the retrieving patterns to respective one row data. One row data is a data array of codes themselves. This data array is replaced with a pointer array that ~~designate~~ designates instances for managing codes to make up a context.

Please replace the paragraph at page 12, lines 17-22, with the following rewritten paragraph:

A plurality of elements (pointers) in each context ~~are~~ selected and rearranged (permutation of context elements) are registered as a row in a facade of an instance that is to be looked up by the header element of the permutation so that several contexts can be integrated with each other for retrieval.

Please replace the paragraph at page 12, line 35, to page 13, line 7, with the following rewritten paragraph:

A combined key is an ordered collection of keys for comparison. As comparison between combined keys is made, any pair of the same lower-order keys are compared only when each pair of the same higher-order keys is pairwise the same as each other. When they do not coincide, the relation (order) between the pair of highest order keys that do not

pairwise coincide is taken as the result of the comparison between them. Comparison between elements as keys is made by comparing codes with each other, that have been stored in cells of instances that are looked up by the elements.

Please replace the paragraph at page 14, lines 16-24, with the following rewritten paragraph:

Tree structures surrounding the node (x) correspond to any one of the three ~~patters~~ patterns shown in FIG. 9. One of the patterns is selected to reconstruct the tree structure. The node (x) goes up the tree structure by one stage and at a new position, selects any one of the tree structures while referring to again the tree structures surrounding the node (x), and the processing proceeds ~~with~~ in the same way as above. This processing continues and finally reaches the root of the tree.

Please replace the paragraph at page 14, lines 30-32, with the following rewritten paragraph:

In addition to the splay-tree ~~algorism~~ algorithm, several methods of managing sorted data are known and which are also effective in data management.

Please replace the paragraph at page 21, lines 23-30, with the following rewritten paragraph:

There are six contexts formed in FIG. 27 for six input data for which the data “SAITO” only is different in data type. The original data and the data (contexts) registered in a database have a good correspondence, thus ~~not so a~~ long time ~~being~~ is not required for making correspondence by distribution or duplication. Moreover, addition of null elements is

not required for forming the same data type, in other words, different types of data can be registered in a database.